COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

TOWN OF FRAMINGHAM REQUEST FOR DETERMINATION OF RATES APPLICABLE TO TRANSPORTATION AND TREATMENT OF SEWAGE PURSUANT TO INTERMUNICIPAL AGREEMENT	)	**D.T.E. 02-46**

TOWN OF FRAMINGHAM'S RESPONSE TO THE DEPARTMENT'S FIRST SET OF INFORMATION REQUESTS

The Town of Framingham ("Framingham") responds to the Department's First Set of Information Requests as follows.

DTE F-1-1

Refer to the SEA Consultants' study "Sewer Rate Assessment Study for Framingham" submitted in response to the Hearing Officer's memorandum dated September 25, 2002 ("SEA Study"). Please provide the date this study was prepared.

RESPONSE

The draft report inadvertently provided to the Department in response to its September 25, 2002 memorandum was prepared over a period of months, but was completed on May 8, 2001. The report subsequently was revised and a final report was issued on May 21, 2001. Excerpts of this final report were attached to Framingham's Petition in this matter, and a complete copy was provided to the Department on December 18, 2002.

DTE F-1-2

Was the SEA Study, or portions of it, ever reviewed by any staff at the Massachusetts Water Resource Authority ("MWRA")? If so, has MWRA expressed agreement with the facts presented? Please describe any elements of the study with which MWRA staff were not in agreement.

RESPONSE

The MWRA received and reviewed the final report. The MWRA disagreed with SEA's statement in Section 6.1.1 that it had erroneously included Framingham's High Strength and Septage flow numbers in its calculation of Framingham's Average Strength Flow number. Framingham is not aware of any other instances of disagreement.

DTE F-1-3

Is the MWRA facility at Arthur Street the only point at which Framingham sewage enters the MWRA system? If not, please indicate the other locations at which sewage from Framingham enters the MWRA system.

RESPONSE

Yes. However, four sewer lines intersect immediately prior to the connection to the MWRA system. Thus, Framingham's municipal discharge permit identifies four connections. A copy of Framingham's current discharge permit and a section of a map detailing the intersection of the four lines are attached at Tab A.

DTE F-1-4

Refer to the SEA Study at §3.1, which states that the map found in Appendix B was compiled from MWRA mapping sources and modified to address specific changes identified by SEA consultants.

a. Were any of the modifications to the MWRA source map relevant to this case? If so, please describe.

b. Please explain the significance of the different colors used on the map.

RESPONSE

(a) The map in Appendix B to the SEA report was based on MWRA schematic maps that were outdated in certain respects. In preparing the map in Appendix B, SEA updated the maps by adding new lines and connections. In the lines utilized by Ashland, SEA added a small section of pipe that was missing from the MWRA schematic in the area of Beaver Street.

(b) SEA prepared the map in Appendix B as a visual aide, rather than as a formal engineering drawing. The thin, light blue lines that appear on the map indicate all gravity sewer lines within Framingham. The thicker, dark red lines (which are drawn on top of certain light blue lines) were intended to highlight the gravity sewer lines that form the "backbone" of the system. The thick, dark blue lines indicate force mains within Framingham, and the thick, dark green lines indicate sewer lines owned by Ashland and other adjoining municipalities.

DTE F-1-5

Refer to the SEA Study at §6.1.1 (last paragraph). Please clarify SEA's critique of MWRA's metering and flow assumptions. In particular, please explain which of these values are "estimated" and what the "potentially erroneous" assumptions are.

RESPONSE

The statements in Section 6.1.1 regarding "estimated" and "potentially erroneous" flow numbers are references to the MWRA's Wastewater Metering Cost Benefit Analysis table, attached

to SEA's report at Appendix A. As noted on the table, some of the MWRA's numbers are estimates, and the table assigns the flow values a potential error percentage, reflecting the fact that the MWRA's meters are not always placed in a way that guarantees the most accurate flow numbers.

In particular, the flow numbers reflecting Ashland's discharge into Framingham's sewer system are identified in the columns headed "AS-FR-1C" (the discharge into the Farm Pond Interceptor) and "AS-FR-2C" (the discharge into the Bates Road Connector). These flow numbers, however, are based on meters actually located in Ashland, rather than meters located at the points at which Ashland's sewage enters Framingham's system, as contemplated in the IMA.[1] Because these meters are not located at the two discharge points, the MWRA's flow numbers are not as accurate as they could be were working meters to be installed at the discharge points.

In particular, the meter for the Farm Pond interceptor is located approximately 2.5 miles before the actual discharge point. Because there will be infiltration and inflow into this pipe between the metering point and the point of discharge, the MWRA's flow number likely underreports the actual flow into Framingham's system. The meter for the Bates Road connection is located only a short distance away from the actual discharge

[1] The IMA required Ashland to install metering devices "at each point of discharge into the Framingham system." (IMA, p. 2, ¶ 4). Ashland failed to install working metering devices at the two discharge points.

point, but there is an additional connection to the Ashland line after the metering point, and before the discharge point, at Douglas Road. The MWRA has attempted to correct for this missed connection by estimating the flow as .01 MGD.[2] While this estimate may be close to accurate, it remains an estimate. Thus, SEA has recommended that future flows be measured using metering devices at the discharge points, as contemplated by the IMA.

DTE F-1-6

Does Framingham accept MWRA's method of calculating Framingham and the Town of Ashland ("Ashland") sewage flows? Please explain any ongoing dispute between Framingham and MWRA regarding flow calculations.

RESPONSE

Yes, with the caveats noted in Framingham's response to DTE F-1-5. Framingham believes it could more accurately account for Ashland's discharges into its system if Ashland were required to install meters at the discharge points as required by the IMA.

DTE F-1-7

Please explain who operates and maintains the two Ashland-owned force mains depicted on the schematic diagram provided in response to the Hearing Officer's Memorandum dated September 25, 2002. Who pays for the operation and maintenance of theses force mains?

RESPONSE

Ashland is responsible for all routine operation and maintenance on the two Ashland-owned pipelines. In past years,

[2] See MWRA's Wastewater Metering Cost Benefit Analysis table, line 5, titled "Douglas Road."

Framingham periodically has had to respond to emergency overflow situations on these pipelines, due to weather or storm flows, and has incurred costs in connection with these efforts. Any decision issued by the DTE, and any future IMA negotiated between the parties, will have to include language clarifying Ashland's responsibility for responding to these emergency overflow situations, or for compensating Framingham if it is forced to respond.

DTE F-1-8

Refer to the SEA Study at §6.1.3.1 (Depreciation). Are the Ashland-owned force mains included in Framingham's system for purposes of calculating system value, replacement value, and depreciation?

RESPONSE

No.

DTE F-1-9

Refer to Framingham's Petitions at 7 and §6.2.3.1 (pages 21 and 23) of the SEA Study. As part of its request for Ashland to pays its proportionate share of operating and maintenance expense, is Framingham requesting that Ashland contribute to "capital replacement of sewer system elements used to convey Ashland wastewater"?

RESPONSE

No, because the current IMA does not permit such a recovery. The current IMA, however, has an anniversary date of December 9, 2003. Framingham submits that any agreement between the parties, or any decision issued by the DTE, that addresses Framingham's transportation of Ashland's sewage beyond

December 9, 2003, will have to address Ashland's obligation to contribute its *pro rata* share of capital replacement costs.

DTE F-1-10

Please provide the diameter (in inches) for the following pipes: (a) the Ashland force main that connects to the Farm Pond interceptor; and (b) the Ashland force main to Bates Road.

RESPONSE

(a) Framingham maps show this pipeline to be 18". Ashland maps show it to be 16". Recent rehabilitation of this pipe by Ashland may have changed the diameter of this pipe.

(b) 8".

DTE F-1-11

Refer to the SEA Study at Table 6.1. What are the units of measurement for the Ashland and Framingham flows? As part of this response, please provide the source of data and the data.

RESPONSE

The unit of measurement is million gallons per day. The source of the data is the MWRA's Wastewater Metering Cost Benefit Analysis table attached to SEA's report at Appendix A. The data was updated by the MWRA in January, 2001. This data was the most recent data available to SEA at the time it prepared its May, 2001 report.

DTE F-1-12

Please describe the location of the "Chestnut Street" connection.

RESPONSE

The “Chestnut Street” connection is another name for the pipeline that leads to the Farm Pond interceptor. It begins at the Chestnut Street pump station in Ashland, runs underground in generally the same direction as Waverley Street through Ashland and into Framingham, passes into the CSX Railway yard, and discharges near the southeast corner of Farm Pond. A map prepared by Haley & Ward in 1989 is attached at Tab B, with the relevant segment highlighted.

DTE F-1-13

Does any Framingham sewage flow into the Beaver Dam interceptor between Herbert Street and Beaver Street? If so, please explain why, on SEA Study Table 6.2, the “Ashland Use %” remains at 20 percent for this segment.

RESPONSE

The repetition of the 20% figure in Table 6.2 is an error. Ashland’s use percentage for the pipe segment located between the Beaver Dam Interceptor and Herbert Street should be 75%, and certain other figures in the table should be recalculated accordingly. A copy of a revised Table 6.2 is attached hereto at Tab C. This error is not directly relevant to Framingham’s position in this matter, however, as Framingham is not seeking to recover past capital replacement costs from Ashland in this action. As set forth in Framingham’s response to DTE F-1-9, however, Framingham does intend to seek to have Ashland pay its

pro rata share of capital replacement costs on and after December 9, 2003.

DTE F-1-14

Refer to Framingham's Petition ¶9. What is the nature of the sulfide damage reported on Framingham's sewage system? Specifically, please identify which pipes or other facilities have been affected by sulfide damage.

RESPONSE

SEA has completed a preliminary study of the sulfide problem in Framingham. Two copies of this report, titled "Final Report on Odor and Corrosion Control Study of the Framingham Sewer System," are being filed herewith (with a copy provided to Ashland's counsel). This report describes in detail the nature of Framingham's sulfide problem, and the impact sulfides have had on Framingham's system. Of particular interest here is Figure 2-2, which is a schematic designed to show areas where wastewater sampling showed sulfide levels in excess of the level of 0.3 mg/l permitted under the most recent municipal discharge permit issued by the MWRA. The schematic shows that the samples taken in all of the pipes utilized by Ashland exceeded permissible levels.[3]

Even more telling are samples taken at the Farm Pond and Bates Road connection points. These samples show that Ashland's discharges, during the months August-October, 2001, routinely exceeded permissible levels, often by a significant margin.

[3] The limit of 0.3 mg/l of dissolved sulfide is applied by the MWRA irrespective of any showing of sulfide damage to the sewer system.

(See Odor and Corrosion Control Study, Appendix 3, Sample Locations A-7 and H-1.) At the Bates Road connection, for example (Location H-1), the samples ranged from 1.6 mg/l to 3.1 mg/l, or five to ten times the permissible limit. At the Farm Pond connection (Location A-7), while three samples were below the permissible limit, two other samples exceeded the limit, with one sample exceeding the limit by a factor of five.[4] Moreover, MWRA data shows that 80% of all sulfates measured at the Arthur Street connection to the MWRA system (the entry point into the MWRA system for all sewage from Ashland and Framingham) are placed into Framingham's system by a single user – Nyacol, a corporation located in Ashland. (See FES Odor and Corrosion Control Study, October 24, 2000, Appendix G, attached hereto at Tab D).

SEA's report does not include a detailed survey of the 275 miles or so of pipe that make up Framingham's sewer system, most of which is underground. SEA is aware of some corrosion that it believes is directly attributable to Ashland's discharges, including a manhole in the CSX railyard (which may have been replaced since the report was prepared) and a brick sewer

[4] Throughout the time period in which SEA was taking samples at the Farm Pond connection, Ashland was treating the sewage flowing to this connection with chemicals in an attempt to address the sulfide problem. As these samples show, Ashland was unable to bring sulfide levels below permissible limits on all occasions, even with the addition of chemicals. No chemicals were introduced into the sewage flowing to the Bates Road connection, as is apparent from the high levels of sulfide discussed above.

structure known as the Willis Street Arch. A detailed survey of the system surely would identify other locations.

DTE F-1-15

Refer to Framingham's Petition at ¶9. What studies have been done to identify the source(s) of the sulfide problem? Please provide copies of any reports, memoranda, or other documents that have been prepared by or on behalf of, or that have been relied upon or reviewed by Framingham on this subject.

RESPONSE

See accompanying SEA report. In preparing this report, SEA reviewed and relied upon several other reports, as listed in the bibliography attached at Tab E. In particular, SEA reviewed and relied upon reports prepared by the MWRA describing the substantial reduction of sulfide at the discharge point to the MWRA upon the temporary closure of the Nyacol plant in Ashland. One of these reports is attached at Tab D.

DTE F-1-16

Refer to Framingham's Petition at ¶9. Please describe the types of actions that may be necessary to address the sulfide problem.

RESPONSE

SEA is now embarking on a further study to address possible means of addressing the sulfide problem. Possible solutions include the elimination of sources of sulfate (i.e., the Nyacol plant in Ashland); the addition of chemical feed systems; the elimination of certain non-essential pump stations; and reconfiguration of parts of the system to eliminate pipes where wastewater tends to remain stagnant.

DTE F-1-17

Refer to Framingham's Reply at ¶8. Please provide documentation of any actions MWRA has taken against Framingham regarding the sulfide problem.

RESPONSE

As a result of high levels of sulfide discharges at the point of connection to the MWRA system, the MWRA imposed a municipal limit on Framingham's discharges of 0.3 mg/l, and stringent limits on industrial users in Framingham and Ashland. The MWRA also issued notices of violation to Framingham. Negotiations thereafter resulted in a settlement agreement between Framingham and the MWRA which, among other things, set a schedule for Framingham to take actions to reduce its discharges of sulfides. Copies of the settlement agreement and correspondence reflecting the industrial discharge limits are attached at Tab F. Also see the municipal discharge permit attached at Tab A.

DTE F-1-18

Refer to Framingham's Petition at 5-6. Please provide all work papers, calculations, assumptions, etc. used to derive Framingham's calculation of Ashland's proportionate share of operation and maintenance expense from 1997 through 2001.

RESPONSE

Please see chart attached at Tab G. Please note that the figure provided in Framingham's Petition for the 2001 fiscal year has been increased from $203,000 (which was based on

estimated budget figures) to $257,162.91 (based on actual, final numbers), and that the flow percentages for 2001 have been adjusted from those set forth in SEA's study to reflect the most recent data available from the MWRA.

DTE F-1-19

Refer to Framingham's Petition at § 5, Exh. A. Please explain why the agreement was not reviewed every five years as specified in the Intermunicipal Agreement therein. As part of this response, please provide all letters and documents related to this issue.

RESPONSE

Framingham only recently has adopted a Town Manager form of government, which has led to greater oversight of contracts entered into between the Town and other municipalities and vendors. Framingham is not aware of any documents responsive to this request.

DTE F-1-20

Refer to the SEA Study at Table 4-1. Please explain the calculations provided in this table, including the source of the data.

RESPONSE

Table 4-1 is intended to reflect the total costs of operating Framingham's sewer system. Operation and maintenance charges are itemized in the top portion of the table, and consist of four different categories – personnel, utilities, other equipment, and indirect costs. As noted in Framingham's reply, there is a mathematical error in the table, in that the

figure indicated for budgeted O&M costs in fiscal year 2001 should be $2,316,814, not $2,041,814. A revised version of Table 4-1 is provided at Tab H.

DTE F-1-21

Refer to the SEA Study at Table 4-1. Please explain the acronym "CIP" found at the bottom of this table.

RESPONSE

Capital Improvement Program. This number represents the cumulative total of capital costs associated with the pump stations, depreciation, and new debt service (including infrastructure upgrades and improvements).

DTE F-1-22

Has the Intermunicipal Agreement dated December 9, 1963 been the only agreement governing sewage operations between Framingham and Ashland to date? If some other agreement or alternative arrangement was applied at any times between December 9, 1963 and the present, please describe the terms of the agreement or arrangement, including payment terms and whether both parties had consented to or signed the then-applicable agreement.

RESPONSE

The IMA is the only agreement between the two municipalities governing Ashland's discharge to Framingham's sewer system. The draft agreement attached to Ashland's answer is not executed and never has been effective.

DTE F-1-23

Refer to the SEA Study at §2.1.2. Please identify and describe in greater detail the direct Ashland connections with the Framingham system not covered by the Intermunicipal Agreement

and indicate why they are not covered. Please clarify whether there are four such connection, as indicated in the text, or eight such connections, as indicated in Table 2-2.

RESPONSE

The direct connects are Ashland users who connect directly to Framingham's sewer system. These users are located near the Ashland/Framingham border, and closer to the Framingham system than to any part of the Ashland system. The direct connects are not covered by the IMA because sewage from these users never flows through Ashland's pipes.

At the time SEA prepared its report, eight Ashland users were directly connected to the Framingham system by means of four pipes. At present, there are 43 Ashland users directly connected to Framingham's system.

DTE F-1-24

Please explain how Framingham bills for services provided to Ashland dischargers who have direct connect connections to the Framingham system (i.e., are not covered under the Intermunicipal Agreement).

RESPONSE

Ashland forwards to Framingham water meter readings for the direct connects. Framingham then bills these customers for sewer services based on the water meter readings provided by Ashland.

DTE F-1-25

Refer to the SEA Study at §3.1.2. Is the flow of the individual customers in Ashland referenced in this section included in the

8.6 percent flow source referenced in Section 2.1.2 of the SEA Study.

RESPONSE

No.

DTE F-1-26

Refer to the SEA Study at §4.1.1. Please indicate the head-count that underlies the personal portion of operation and maintenance expense. Also please provide a listing of positions and salaries for all employees.

RESPONSE

Please see documents attached at Tab I. Framingham has provided information with respect to those employees whose salaries are assessed entirely to the sewer department, and those employees whose salaries are assessed partially to the sewer department.

DTE F-1-27

Refer to the SEA Study at §4.1.1, Table 4-2. Please provide additional detail regarding the operation and maintenance expense category entitled "Telemetric-Pump Station" found on the third line from the bottom of the table.

RESPONSE

This charge is for a telephone service that alerts sewer personnel to problems in the operation of the system. Please note that Table 4-2 was deleted from the final version of SEA's report, to conserve space.

DTE F-1-28

Refer to Framingham's Petition at 4. Please provide the source and supporting documentation for Framingham's statement that Ashland is maintaining that Ashland's proportionate share of

annual operation and maintenance expense is approximately $18,300.

RESPONSE

This figure was taken from the report prepared by Ashland's consultant, Vollmer Associates, LLP. (See page 5, item 1). Ashland has disregarded the conclusions of its consultant and now proposes that its proportionate share should be about half of what Vollmer proposes, or $9,705. (See Ashland's Answer, ¶ 13).

DTE F-1-29

Considering only those pipes used by Ashland in the Framingham system, what percentage of the total flow in these pipes represents flow from Framingham customers and what percentage represents flow from Ashland customers? Please provide data for FY 1999, FY 2000, FY 2001, and the average of these three years. As part of this response, please provide all work papers, assumptions, etc. used in these calculations.

RESPONSE

In responding to this question, Framingham notes that it objects to any attempt to calculate Ashland's obligation to Framingham on the basis of the amount of pipe utilized to transport Ashland's flow through Framingham. As set forth in SEA's report and in Framingham's Petition, the only fair and accurate way to calculate Ashland's proportionate share of O&M costs is to multiply total O&M costs by the ratio of Ashland's sewer flow to the overall flow within the system. Ashland has not pointed to a single example of a utility or municipality

basing its charges to customers on a calculation only of those portions of the system utilized by the customer.[5]

Subject to and without waiving this objection, as indicated in Framingham's response to DTE F-1-5, the only available flow data regarding Ashland's sewage discharges are based upon MWRA metering stations located in Ashland. In FY 1999, the MWRA meters indicated that Ashland's flow was 8.79% of the total flow in Framingham's system. In FY 2000, this figure was 13.45%. In FY 2001, this figure was 13.08%. As described in Framingham's response to DTE F-1-5, these flow numbers do not pick up any additional flow that might enter Ashland's pipes before the pipes discharge into Framingham's system. For that reason, the DTE should require that Ashland fulfill its obligation under the IMA to establish metering devices at the two points of discharge into the Framingham system.

In addition to the inherent flaws of the Ashland/Vollmer proposal regarding the calculation of sewer usage, as described above and in other pleadings filed in this case, neither Ashland nor Framingham have data demonstrating the percentage of each municipality's flow within Framingham's pipes between the two points of discharge and the discharge to the MWRA system. As

[5] Telephone users, for example, are not billed only for those sections of the lines utilized by particular customers to reach switching stations. Rather, users are charged for their *pro rata* share of maintaining the system as a whole.

shown on the map attached at Tab J, after Ashland's sewage enters Framingham's system at the Farm Pond interceptor, there are many connection points at which additional Framingham sewage enters the line before it exits to the MWRA's system.[6] Thus, one would have to install and maintain a metering device at each of these later connection points to accurately measure, at any point in the pipe, the percentage of Ashland flow vs. the percentage of Framingham flow. There currently are no such meters, and therefore Framingham does not have the data necessary to answer this request in full. Moreover, installation of such meters at each and every connection point following the Farm Pond interceptor would constitute an unreasonable logistical and administrative burden, and simply is not reflective of industry practices as to how sewer usage is recorded and billed.

DTE F-1-30

Considering only those pipes used in Ashland in the Framingham system, please calculate the operation and maintenance expense that would be directly relates to this portion of Framingham's system. Please provide data for FY 1999, FY 2000, FY 2001, and the average of these three years. As part of this response,

[6] The green lines on the map depict the Ashland-owned pipelines that transport Ashland's sewage to the two points of discharge to the Framingham system. The red lines depict the major pipes by which Ashland's sewage (along with Framingham sewage) is transported to the MWRA connection. The thick purple lines are located at points at which significant amounts of Framingham sewage enter the lines after the two discharge points from the Ashland-owned pipelines. Each thick purple line is accompanied by a thin purple line, or "cloud," intended to designate those homes, businesses, and other facilities that likely contribute sewage to the Framingham system at that particular entry point. Each of these fourteen areas is marked with a capital letter between A-N. The largest of these areas, marked area "N," encompasses an estimated 10,000 users.

please provide all work papers, assumptions, etc. used in these calculations.

RESPONSE

Framingham does not track its operation and maintenance expenses by particular pipe sections, nor do any other municipalities, to Framingham's knowledge. Thus, it does not have the data available to respond to this request.[7] There are operation and maintenance expenses (e.g., pumping station costs) that are not attributable to the specific pipe segments used by Ashland, but that are nonetheless essential to keeping the system as a whole operational and in good working order.

DTE F-1-31

Please describe any additional facilities in the Framingham sewerage system, other than the pipes addressed in DTE F-1-30, that are needed to convey Ashland sewage to the MWRA system. In addition, please provide

a. flow data through these facilities for FY99, FY00, FY01 and the average of these three years; and
b. O&M data for these facilities for FY99, FY00, FY01 and the average of these three years.

As part of this response, please provide all work papers, assumptions, etc. used in these calculations.

RESPONSE

Framingham would not be able to transport Ashland's sewage unless it maintained an operating sewer system in its entirety – thus, Framingham considers all facilities in its system "necessary" to convey Ashland's sewage, with each user

[7] The fact that such data is not maintained by Framingham or any other municipality is further evidence that Ashland's proposal to calculate O&M charges based on actual pipe usage is not consistent with industry practice.

(including Ashland) paying its *pro rata* share of all costs. As stated previously, the actual pipes used by Ashland are but one component of the actual sewage system components necessary to transport Ashland's sewage.

With respect to the specific question, Framingham believes that Ashland's sewage normally flows through only those pipes addressed in DTE F-1-30. When there are flows exceeding the capacity of downstream sewers in the MWRA system, flows from Ashland (along with flows from Framingham) are temporarily stored in an overflow pipe located near the discharge to the MWRA's system, and possibly in other pipes within the Framingham system.

Respectfully submitted,
THE TOWN OF FRAMINGHAM,
By its attorneys,

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